

CLAIMS

What is claimed is:

- 1 1. A machine implemented method comprising:
2 accessing rows in a table, where
3 each row in the table corresponds to a dimension value combination and
4 a location at which each row is stored is determined based on the dimension
5 value combination to which the row corresponds; and
6 wherein the accessing of the rows also includes, in response to receiving a request for
7 a row corresponding to a particular dimension value combination, using the
8 particular dimension value combination for calculating the location of the
9 particular row.
- 1 2. The method of claim 1, wherein
2 the dimension value combination includes values for one or more dimensions, and
3 the table does not include columns for storing values for the one or more dimensions.
- 1 3. The method of claim 1, wherein said table includes a plurality of segments, and
2 wherein each segment stores rows for a contiguous range of dimension value
3 combinations.
- 1 4. The method of claim 3, further comprising creating an indexed organized table
2 (IOT) that includes
3 an entry for each segment in the plurality of segments, and
4 the calculating of the position of the particular row is based in part on
5 information contained in the entry that corresponds to the segment that
6 contains the particular row.

- 1 5. The method of claim 3,
2 wherein sizes of the plurality segments and locations contained within the plurality of
3 segments are allocated according to a density of discontinuities in ranges of
4 dimension value combinations
- 1 6. The method of claim 3, further comprising accessing an indexed organized table
2 (IOT) that includes an entry for each segment in the plurality of segments; and
3 the calculating of the position of the particular row is based in part on
4 information contained in the entry that corresponds to the segment that
5 contains the particular row.
- 1 7. The method of claim 6, wherein the index organized table includes nonkey
2 information used for determining locations of gaps in ranges of dimension
3 value combinations that are between the segments.
- 1 8. The method of claim 6, wherein at least one of the plurality of segments includes
2 more than one contiguous range of dimension value combinations.
- 1 9. The method of claims 6, wherein at least one of the plurality of segments
2 comprises at least two contiguous range of dimension value combinations that
3 are joined together by at least one dummy entry in the table, therein forming
4 one contiguous range of dimension value combinations.
- 1 10. The method of claim 6, wherein the at least two of the plurality of segments are
2 each divided into blocks having a block size, and the block size of a first of
3 the at least two of the plurality of segments is different from the block size of
4 a second of the at least two of the plurality of segments.

1 11. The method of claim 5, wherein the IOT includes an identification of a reference
2 location for each segment of the plurality of segments from which offsets
3 from the reference location are calculated to reach other locations in each of
4 the segments.

1 12. The method of claim 3, wherein each of the plurality of segments is divided into
2 one or more blocks of equal size.

1 13. The method of claim 1, wherein the accessing of the location of interest is also
2 performed by at least accessing a table having an identification of a dimension
3 value of a reference location included in the block from which offsets are
4 calculated to other locations.

1 14. The method of claim 13, wherein the reference location is an index value of a
2 first of location within a segment that stores rows for a contiguous range of
3 dimension value combinations.

1 15. The method of claim 13, wherein the table having the identification is a B-tree
2 index.

1 16. The method of claim 13, wherein the table having the identification is a bit map
2 index.

1 17. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 1.

1 18. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 2.

1 19. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 3.

1 20. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 4.

1 21. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 5.

1 22. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 6.

1 23. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 7.

1 24. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 8.

1 25. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 9.

1 26. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 10.

1 27. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 11.

1 28. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 12.

1 29. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 13.

1 30. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 14.

1 31. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 15.

1 32. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 16

1 33. A computer-readable medium carrying one or more sequences of instructions,
2 which when executed by one or more processors, causes the one or more
3 processors to perform the method recited in Claim 17

1 34. A system comprising a computer readable media system including one or more
2 computer readable media, the computer readable media system having stored
3 therein at least:
4 a table storing data on the computer readable media that corresponds to locations
5 associated with at least one dimension value;
6 wherein the data items are stored in the table in an order dictated by the data values to
7 which the data items correspond; and
8 wherein the table does not store values for the particular dimension.

1 35. The system of claim 34, wherein all of the locations of the table that have non-
2 null values are organized into one or more segments, each segment including
3 a contiguous region of data without discontinuities in the dimensions.

1 36. The system of claim 35, wherein the table has associated with it at least one
2 dimension value combination
3 that is associated with a null value, and
4 that is not included in any of the one or more segments.

1 37. The system of claim 36, wherein the computer readable media system also has
2 stored therein at least:
3 another table storing identifiers for determining the locations stored within each
4 segment of the one or more segments.